UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, DC 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
09/065,082	07/16/98	RAKOCZY	P	P66-40774

HM12/1213

VIVIANA AMZEL
ARTER AND HADDEN
725 SOUTH FIGUEROA STREET,#3400
LOS ANGELES CA 90071

EXAMINER	
MCGARRY,S	
ART UNIT	**PAPER NUMBER**
1635	20

DATE MAILED:
12/13/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

file

Office Action Summary	Application No. 09/065,082	Applicant(s) Rakoczy et al
	Examiner Sean McGarry	Group Art Unit 1635

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *59-109* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *59-109* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *17*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

1. The amendment filed 10/28/99 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The amendments adding a description of Figures 14 and 15 (No figure 14 or 15 was filed with the instant application and no Figure 14 or 15 was filed with the amendments filed 10/28/00. The amendments to add Examples 19 and 20. It is noted that applicant representative asserts that this matter was introduced during the PCT phase but the record thereof indicates that at that time the matter was indicated as new matter as well (see PCT/IPEA/416 mailed 10 Feb. 1998).

Applicant is required to cancel the new matter in the reply to this Office action.

2. The substitute specification filed 10/28/99 has not been entered because it does not conform to 37 CFR 1.125(b)because: applicant only supplied a marked up copy with no clean copy to enter.

3. This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications

Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures. The Sequence listing filed 2/7/00 contains new matter (SEQ ID NO: 3-11 see new matter objection above). Applicant must comply with the requirements of 37 CFR 1.821 through 1.825 in response to the instant Office Action for such a response to be considered complete.

4. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because the specification as filed contains yellow highlighting of references cited within.

A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

5. The amendment filed 2/7/00 deletes claims 2-58. Claim 1 was canceled and claims 59-109 were added in the preliminary amendment filed 4/23/98. The amendment filed 10/28/99 contained improper amendments that introduced changes in claim numbers by amending the claim numbers themselves. Because the amendments filed conflict and in order to expedite the examination of the

instant application the claims filed 4/23/98 are under examination. The amendment filed 10/28/00 contained improper amendments that leave claims 59-60 conflicting with the amendments filed 4/23/98. The claims filed 4/23/00 appear to be consistent with the claims not canceled in the amendment filed 2/7/00 which canceled claims 2-58. A copy of the claims under examination is attached. It is requested that applicant, in response to this Office Action, cancel all pending claims 58-109 and submit new claims beginning with claim 110 to clarify the confusing record at hand.

6. The disclosure is objected to because of the following informalities: The specification as amended 10/28/00 refers to Figures not present in the application (Figures 14 and 15).

Appropriate correction is required.

7. The information disclosure statement filed 4/23/98 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. No copies of any references have been provided. It is noted that applicant representative indicated in the papers filed 4/23/98 that copies would be made of record when they became available, however no copies have been made of record. US patent 5,324,654 has been obtained and considered.

8. Claim 72 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 72 recites the use of "Ad.RSV.αVEGF" and "Ad.VA1.αVEGF". The specification discloses "Ad.RSV.aVEGF" and "Ad.VA1.aVEGF". If these are the intended vectors and amendment to recite such would be remedial.

9. Claim 65 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 65 recites "wherein the vector is a liposome". It is unclear how a nucleic acid is "operatively linked to a liposome" (limitation of claim 62).

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

11. Claims 59-61 and 63, 104, 106, and 107 rejected under 35 U.S.C. 102(e) as being anticipated by Baird et al US Patent No 6,037,329.

Baird et al disclose Compositions for the treatment of cells. It is disclosed that the compositions include nucleic acid encoding a protein and antisense and further disclose the inclusion of hyaluronic acid for opthamolic applications.

12. Claims 75, 76, 78-82, 94, 95, and 97-99 are rejected under 35 U.S.C. 102(e) as being anticipated by Robinson et al [US patent No. 5,801,156].

Robinson et al disclose antisense oligonucleotides targeted to VEGF an methods of treating ocular as well as neovascular disease. It is disclosed the use of liposomes, for example, as a pharmaceutical carrier that increases cellular uptake.

13. Claims 75, 76, 78-82, 94, 95, and 97-99 are rejected under 35 U.S.C. 102(e) as being anticipated by Robinson et al [US patent No. 5,814,620].

Robinson et al disclose antisense oligonucleotides targeted to VEGF an methods of treating ocular as well as neovascular disease. It is disclosed the use of liposomes, for example, as a pharmaceutical carrier that increases cellular uptake.

14. Claims 75, 76, 78, 82, 94, 95, and 97-99 are rejected under 35 U.S.C. 102(e) as being anticipated by Robinson [US patent No. 5,639,736].

Robinson et al disclose antisense oligonucleotides targeted to VEGF an methods of treating ocular as well as neovascular disease. It is disclosed the use of liposomes, for example, as a pharmaceutical carrier that increases cellular uptake.

15. Claims 75, 76, 78-82, 94, 95, and 97-99 are rejected under 35 U.S.C. 102(e) as being anticipated by Robinson et al [US patent No. 5,731,294].

Robinson et al disclose antisense oligonucleotides targeted to VEGF an methods of treating ocular as well as neovascular disease. It is disclosed the use of liposomes, for example, as a pharmaceutical carrier that increases cellular uptake.

16. Claims 75, 76, 78-82, 94, 95, and 97-99 are rejected under 35 U.S.C. 102(e) as being anticipated by Robinson et al [US patent No. 5,710,136].

Robinson et al disclose antisense oligonucleotides targeted to VEGF an methods of treating ocular as well as neovascular disease. It is disclosed the use of liposomes, for example, as a pharmaceutical carrier that increases cellular uptake.

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

18. Claims 59-62, 65, 77, 96 and 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al [US patent No. 5,801,156] or Robinson et al [US patent No. 5,814,620] or Robinson [US patent No. 5,639,736] or Robinson et al [US patent No. 5,710,136] in view of Baird et al [US Patent No 6,037,329] or Domb US patent No. 5,660,851].

The claimed invention is drawn to compositions comprising antisense oligonucleotides and hyaluronic acid and methods of use thereof.

All of the Robinson and Robinson et al references have taught antisense oligonucleotides targeted to VEGF an methods of treating ocular as well as neovascular disease. It has been taught the use of liposomes, for example, as a pharmaceutical carrier that increases cellular uptake. Robinson and Robinson et al do not teach the use of hyaluronic acid.

However Baird et al have taught the use of hyaluronic acid as a carrier in opthamalic applications. Domb has taught Ocular inserts for the treatment of ocular disorders where these inserts contain a drug of choice and also contain hyaluronic acid.

Since the methods taught by Robinson and Robinson et al are antisense treatment of the eye with antisense it would have been obvious to use the teaching of Baird et al that teach that viscoelastic materials such as hyaluronic acid is beneficial in the application of ocular treatment and the teachings of Domb who also teach the use of hyaluronic acid in ocular treatments.

The invention as a whole would therefore have been prima facie obvious to one of skill in the art at the time the invention was made.

19. Claims 62-64, 66-71, 73, 74, 83-93 and 100-109 rejected under 35 U.S.C. 103(a) as being unpatentable over are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al [US patent No. 5,801,156] or Robinson et al [US patent No. 5,814,620] or Robinson [US patent No. 5,639,736] or Robinson et al [US patent No. 5,710,136] in view of Baird et al [US Patent No 6,037,329] or Domb US patent No. 5,660,851] as applied to claims 59-62, 65, 77, 96 and 100 above, and further in view of Noonberg et al [US Patent No. 5,624,803].

The claimed invention is that described above and further including that the compositions comprise the antisense in a vector.

The Robinson, Robinson et al, Domb, and Baird references above do not specifically teach antisense in a vector, however Noonberg et al teach the use of various vectors that are and were

well known in the art at the time of invention. The advantages of various vectors are discussed and one in the art would choose any of various vectors in the art based on the application and advantages and disadvantages of any specific vector for any specif purpose. The specific vectors recited in the claims are all well known vectors and would be a matter of design choice. The selection of the vectors in the instant claims is based on the cumulative knowledge in the art for vector selection. One in the art would been motivated to choose any particular vector to express a VEGF antisense for various purposes such as, for example, to assess the role of VEGF in neovacularization associated disease states which include cell types , requiring different vectors, such as tumor growth and healing.

The invention as a whole would therefore have been prima facie obvious to one in the art at the time the invention was made.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean McGarry whose telephone number is (703) 305-7028.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John LeGuyader, can be reached on (703) 308-0447.

Certain papers related to this application may be submitted to Art Unit 1635 by facsimile transmission. Papers should be faxed to Art Unit 1635 via the PTO Technology Center Fax

Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see C.F.R. 1.6(d)). The Art Unit 1635 FAX number is (703) 308-4242 or (703) 305-3014. NOTE: If Applicant **does** submit a paper by Fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Sean McGarry

November 20, 2000

Sean McGarry
Patent Examiner
Technology Center 1600